Dear Dave Barthelmy

You may have noticed that our newsletters have been a bit infrequent of late. We’ve both been struggling with a rather bad cold that seems to be even more vicious than the flu.

We think we’re back on board now, so hopefully we’ll be putting specimens up on the website a bit more frequently and sending more regular updates too.

We’ve included a few more Malawi Zircons in this issue – they never fail to fascinate. And we have a couple of rather nice apophyllites and beryls as well.

In keeping with Bruce’s article on Tsumeb in this issue, we have featured a couple of Tsumeb dioptases and cerussites. We hope you like them.

Keep well! All the best

Bruce and Susan

NB: If you are having trouble displaying the images in this newsletter, you may click the 'display content' link at the top of your page. Also, adding our email address to your address book will in many cases solve the problem. You can view this newsletter by going to our newsletter page, clicking on the + sign, and selecting the newsletter you wish to view.

Tsumeb, Namibia

Probably no other mineral location so readily conjures up visions of high quality and exotic mineral specimens of extraordinary beauty.

Tsumeb is located at 1300m in the foothills of the Otavi Mountains about 430km slightly east of due north of the Namibian capital of Windhoek.

Tsumeb is famous for the enormous number of minerals occurring there. 270 valid minerals attributed to the lode with 61 of these minerals having Tsumeb as their type locality and a 30 species being unique to the location.
The lode consists of a rich selection of primary sulphide minerals including galena, tennantite, sphalerite, chalcocite, bornite, pyrite and enargite with lesser quantities of many other sulphides and sulphosalts.

The major gangue minerals include andradite, rhodonite, calcite, quartz, feldspars and fluorite and there are many, many more.

Tsumeb is characterized by its unique secondary minerals including spectacular malachite, azurite, diopside, cerussite and smithsonite. Not only is the quality and variety of the secondary minerals almost unique but also their unusual occurrence makes this deposit of great interest. Tsumeb has the usual near surface zone containing the secondary mineral suite but also has another series of secondary zones at depths ranging from 750m to 1160m. This series of lower secondary zones is caused by the intersection of a porous paleoaquifer feeding aerated water into the primary ore zone.

The ore zone consists of a pipe of greatly varying geometry and dimensions. With near surface dimensions are about 100m by 20m. The dip and strike also show considerable variation. The pipe is known to extend to 1716m below the surface.

The mineralization in the tsumeb pipe is believed to been emplaced by mineralized fluids mobilized by localized mountain building 580 to 550 million years ago.

The pipe is considered to be related to a karst structure in limestone and dolomite sediments rich in stromatolites. One can imagine the complexity of the chemical processes involved when hot, mineral laden fluids from a mobile, mountain building basement migrated along this pipe system giving rise to the complex and exciting Tsumeb deposit.

Unlike the singular Broken Hill deposit in Australia, Tsumeb is one of a number of similar deposits in the region.

There is an extensive literature readily available, covering this famous deposit, many with wonderful illustrations. You will find reading the available material intellectually rewarding and a wonder to the senses.
Zircon
Zircon, Kasungu, Malawi.

Mimetite, Pyromorphite
Mimetite & Pyromorphite, Mt Bonnie, NT, Australia.

Adamite
Adamite, Mapimi, Durango, Mexico.

Beryl
Beryl, Mt Xuebaoding, Ping Wu, Sichuan, China.

Apophyllite
Green apophyllite crystals, Poona, India.

Apophyllite
Green apophyllite crystals, Poona, India.

Beryl
Beryl, Mt Xuebaoding, Ping Wu, Sichuan, China.

**Featured Stock**

**Cerussite Crystals**

Cerussite crystals, Tsumeb, Namibia.

**Cerussite crystals**

Cerussite, Tsumeb, Namibia.

**Dioptase**

Dioptase, Tsumeb, Namibia

**Dioptase**

Dioptase, Tsumeb, Namibia.

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**Itinerary**

**September**

**Sunday 20th September 2009**
Bushland Shire Festival
(Hornsby Council)
Fagan Park, Arcadia Road
Galston (Sydney NSW)

**October**

**Saturday 3rd to Monday 5th October 2009**
Gemkhana
Recreation Area
Braidwood Rd, Goulburn NSW